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Cc: Eden Wells Dr[wellse3@michigan.gov]
From: Scott Smith
Sent: Sat 3/19/2016 12:31:45 PM
Subject: Follow Up - MI-DEQ / EPA / Water Defense Meeting

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All,

Thanks for taking the time to meet with me yesterday. The purpose of this e-mail is to summarize our meeting and outline follow up items. Please let me know if I missed anything, got something wrong, and/or if you have any additions.

I will be meeting this morning at 10 AM with Bryce again with Harold Harrington and Ben Ranger for the UA Plumbers and Pipefitters Union. Hopefully, Dr. Wells will be able to join us this morning.

Below is a summary of the meeting, follow up actions, and questions:

1. Flint has an inefficient water distribution system as it is sized 3 times larger than it should be. Old water in the system is an issue. There have been chlorine valve malfunctions. Chlorine pellets have been added manually. What does all of this mean? Do we have detailed data on this? Is this potentially part of the issues with rashes and people complaining of getting sick from showering / bathing? Do comprised galvanized pipes have something to do with the rash and health issues?
2. EPA has initiated testing of 100 homes. I understand there are about 40,000 homes in Flint. Given all the variables, statistically, can we draw definitive conclusions with this sample size?
3. One thing the government agencies are struggling with is basing health and human safety for bathing / showering on drinking water standards. There seems to be agreement with me / Water Defense on concerns of declaring water safe to shower / bathe in based on drinking water standards as no one really drinks hot / warm bath water that utilizes a water heater – and chemicals like chloroform are not only absorbed through the skin and are lipophilic, but also volatilize in the air and are breathed directly into the lungs. 3 human exposure pathways – drinking, bathing / showering – dermal absorption, and breathing (volatiles / chloroform – trihalomethanes). Water concentrations of lead and other chemicals do not correlate to dermal (skin) absorption. Both Scott Smith and Mark Durno raised the questions of there not being any studies on dermal absorption and/or bathing / showering standards for health and human safety. Given this, what is the basis for the Bulk Text that was sent out to the community last week declaring the water safe to bath and shower in? This is the direct quote from the Bulk Text “Flint Pediatrician Dr. Mona says based on current scientific testing, bathing is safe and warm showers are best. More: <https://www.cityofflint.com>.” This is a strong statement. Where is the backup data for this statement? What current scientific testing is Dr. Mona referring to? Was this statement based on drinking water standards? Was there a toxicology review? Were any bathtub /shower water tests done prior to this statement and if so, where are these detailed test reports? I keep asking are there bathing / showering standards and/or studies we have not seen? – and I have been told these standards / studies do not exist.
4. The rash investigations include 300-400 cases.
5. How water heaters and follow up testing is important. Water Defense has found lead in water heaters. Given that ph variation can cause lead to go into solution, what data do we have available to monitor this and how are we going to monitor this?
6. Particulate lead appears to be a longer term problem. There has not been much of a discussion about particulate lead with the community. It may be that the lead pipes can heal themselves with the orthophosphate; however, it appears that the galvanized pipes and copper

pipes could continue to pose risks longer term. Once the galvanized pipes were compromised with the corrosive Flint river water, how effective is the orthophosphate? For example, why are we continuing to see 350 ppb of lead entering [Ex. 6 - Personal Privacy] house? [Ex. 6 - Personal Privacy] still has concerning lead levels in his water heater as does [Ex. 6 - Personal Privacy] What sampling size is necessary in Flint to draw conclusions about what is in the water heaters and what are the associated longer term risks?

7. Scott Smith will send a separate e-mail with all the detailed ALS Environmental Lab reports. EPA / MI-DEQ will also send to Water Defense all detailed lab reports. We can then cross reference all the data. Scott Smith will introduce Mark Johnson to the entire Water Defense scientific and toxicology support team, set up a conference call, and discuss in detail the open-cell matrix Waterbug testing for cumulative / exposure over time. Water Defense has taken grab samples too and tested for the full spectrum of chemicals VOC's, SVOC's, and Metals. Furthermore, in the homes Water Defense tested with grab samples we tested the state of the water as it enters the home is testing, water heaters, and bathtubs and showers.

Thanks again for taking the time to meet with me. On behalf of Water Defense, we look forward to working with all of you to support the community and great people of Flint.

Best Regards,

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